

First Named Inventor: Pat Reich

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lift system, the arm comprising a shoulder between the lever first end and the deck lift system second end generally adjacent the operator seating area, wherein the shoulder connects to and extends generally normal to the arm; and

a cam wheel rotationally connected to the frame of the mower proximate the shoulder of the arm, the cam wheel having an axis of rotation and an outer edge of varying radius relative to the axis of rotation, wherein the shoulder contacts a portion of the outer edge when the lever is in a first position, the shoulder is spaced from the outer edge when the lever is in a second position, and wherein the mowing deck height above the ground surface is a function of the radius of the cam outer edge in contact with the shoulder.

2. (Original) The apparatus of claim 1 wherein the lever is a foot actuatable lever.
3. (Original) The apparatus of claim 1 and further comprising a handle connected to the cam wheel, the handle enabling a user to rotate the cam wheel.
4. (Original) The apparatus of claim 3 wherein the cam wheel is fixed on a shaft rotatable by the handle, the shaft rotationally connected to the frame of the mower.
5. (Original) The apparatus of claim 4 and further comprising a height selector wheel fixed to the rotatable shaft adjacent to the cam wheel, the height selector wheel comprising a plurality of circumferential notches, wherein each notch corresponds to a different radius of the cam wheel.

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6. (Original) The apparatus of claim 5 and further comprising a latch pivotally connected to the frame of the mower, the latch comprising a finger, the finger of the latch engaging a notch of the height selector wheel when the latch is in a first position, and the finger of the latch disengaging the notch when the latch is in a second position, the cam wheel being rotatable by the handle when the latch is in the second position.

7. (Original) The apparatus of claim 6 wherein the height selector wheel comprises a first planar surface oriented towards the operator seating area, the first planar surface having indicia at each notch indicative of a height of the mowing deck relative to the ground surface when the finger of the latch engages the notch.

8. (Original) The apparatus of claim 1 and further comprising a transport lock, the transport lock rotatably connected to the frame of the mower proximate the operator seating area, the transport lock having a handle and a finger, the finger engaging the shoulder of the moveable arm when the lever is in the second position and the transport lock is in a first position to secure the mowing deck in a fully raised position, and the finger disengaging the shoulder when the transport lock is in a second position to permit the lever to move to the first position.

9. (Original) A method of adjusting the deck height on a riding mower from a first deck height to a second deck height, the riding mower comprising a frame, a deck lift mechanism connected to the frame, a mowing deck connected to and supported by the deck lift mechanism, and an operator seating area, the method comprising:

providing a lever pivotally connected to the frame proximate to the operator seating area;

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providing a displaceable arm operably connected between the lever and the deck lift system, the displaceable arm comprising a shoulder on the arm between the lever and the deck lift system; and
providing a cam wheel rotationally connected to the frame near the shoulder of the displaceable arm, the cam wheel having an axis of rotation, an outer edge, and a varying radius relative to the axis of rotation, wherein a portion of the outer edge contacts the shoulder when the lever is in a first position;
moving the lever from the first position to a second position, and displacing the arm and locating the shoulder away from the outer edge of the cam, thereby lifting the mowing deck to a raised position;
rotating the cam wheel to a position representative of a desired deck height;
and
moving the lever from the second position to the first position, thereby displacing the arm and locating the shoulder in contact with the cam outer edge to lower the mowing deck to the desired height.

10. (Original) The method of claim 9, wherein the step of providing the cam wheel further comprises providing a disk rotationally connected with the cam wheel, the disk and cam wheel rotating on a common axis, wherein the disk comprises a plurality of circumferential notches, and positioning a latch in a first circumferential notch.

11. (Original) The method of claim 10 wherein disk further comprises indicia at each of the plurality of circumferential notches indicative of a height of the mowing deck relative to the ground surface.

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12. (Original) The method of claim 10 wherein the step of rotating the cam wheel additionally comprises:

disengaging the latch from the first circumferential notch of the disk;
rotating the cam wheel and the disk; and
engaging the latch into a second circumferential notch in the disk.

13. (Original) The method of claim 10 wherein the step of providing the lever comprises providing a foot-actuated lever near the operator seating area.

14. (Currently Amended) A deck lift system for adjusting the height of a mowing deck of a riding mower relative to a ground surface, the mower having an operator seating area and a frame, the deck lift system comprising:

a rear rotating assembly rotatably connected to the frame and connected to a rear portion of the mowing deck;
a front rotating assembly rotatably mounted to the frame and connected to a front portion of the mowing deck;
linking members connecting the front and rear rotating assemblies;
a means for operating the deck lift system to raise and lower the mowing deck, wherein the means for operating comprises:
a lever pivotally connected to the frame proximate to the operator seating area; and
~~a displaceable arm operably connected between having a first end pivotally connected to the lever and a second end connected to the rear rotating assembly of the deck lift system; and~~
means operable within the operating means for adjusting the height of the mowing deck, wherein the means for adjusting the deck height comprises:

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a shoulder connected to the arm between the first end and the second end, the shoulder extending normal to a direction of displacement of the displaceable arm; and

a cam wheel rotationally connected to the frame of the mower proximate the shoulder of the arm, the cam wheel having an axis of rotation, an outer edge, and a varying radius relative to the axis [[or]] of rotation, wherein a portion of the cam outer edge contacts the shoulder when the mowing deck is in the deck down position, and wherein the height of the mowing deck above the ground surface in the deck down position is a function of the radius of the cam outer edge in contact with the shoulder.

15. (Canceled)

16. (Canceled)

17. (Original) The deck lift system of claim 14 wherein the means for adjusting the deck height at the deck down position additionally comprises means for locking the cam wheel at a position representative of a selected deck height.